

### Abstract of the Disclosure

The invention provides a router architecture that is scalable, that is, as more processing power is desired, more individual processors can be added. The data flow from each line can be distributed among all of the processors in the system. As desired services are added, increasing the amount of “touch” or processing performed on the packets in the system, more processors can be added to carry the increased load. The router architecture is also able to distribute the high interface rate of an uplink connection in the same manner. Packets are allocated to processors in a manner that allows the original order of data packets within the same flow to be maintained. The system uses a hash function to distribute the flows, making sure that packets within the same flow are sent to the same processor so that the original packet order in each flow is maintained. Different flows may be sent to different processors.